

# Some mites (Acarina: Hydrachnellae) from a dolomite spring in the Western Transvaal.

by

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The Mooi River (Potchefstroom) is formed mainly by dolomite springs, one of which is on the farm Gerhardminnebron, 14 miles N.E. of Potchefstroom. The stones in the spring are covered with aquatic mosses while the central part of the spring, which has mainly a sandy bottom, has a growth of *Nasturtium officinale* R.Br.

Watermites, mostly *Thayasidae*, were found chiefly amongst the roots of the water cress, and to a lesser extent in the moss.

Collections made during 1957 yielded numerous specimens of the genus *Hansvietsia* Viets. Most of these were *H. sempiterna* Viets, but others appear to be a new species. The type material is deposited in the collection of the institute for Zoological Research, Department of Zoology, Potchefstroom University.

The subfamily *Teratothyasinae* Viets 1929 contained the genera *Teratothyas* Viets 1929 and *Teratothyasides* Lundblad 1941. During 1951 Karl Viets added the new genus *Hansvietsia* with the single species *H. sempiterna*. This mite was collected in 1949 by F. Vaillant in a spring in the Central Sahara during the "Mission Scientifique au Tassili des Ajjer."

***Hansvietsia reticulatus* n. sp.** Figs. 1-3.

*General description:* These mites have a characteristic light red colour and can easily be seen in a tray with a white bottom. When seen under a microscope, they have a beautiful reticulated appearance due to the structure of the shields.

*Dimensions:* Length of body 944  $\mu$ ; width of body 652  $\mu$ .

*Dorsal surface:* (Fig. 1). Each half is provided with 5 dorsolateral and 3 dorsocentral plates. Excepting the anterior dorsocentral plate, each of these bears a simple seta and a skin gland. Between the widely separated

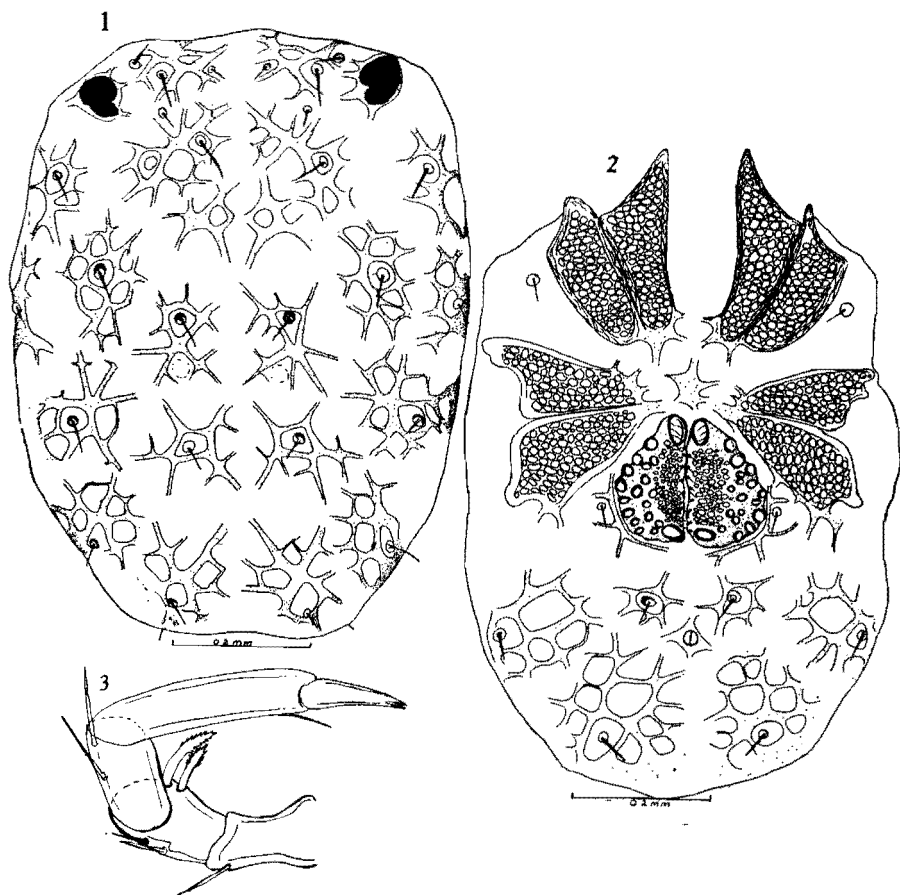
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eyes, which are situated in eyecapsules; are two anterior plates each bearing three setae. Between these plates and the anterior pair of dorsocentral shields another pair of setae occur. Two lateral setae, one on each side, are in most cases visible in the dorsal view.

The structure of the plates resembles the veins on the abaxial surface of leaves. This is the most conspicuous character by which this species can be distinguished from *H. sempiterna* under a magnification of 40 x. The pores of the plates are large and almost diamond-shaped while the edges of each plate in living specimens appear to have long thin needlelike protruberances which form a symmetrical network on both the dorsal and ventral surfaces.

**Ventral surface:** (Fig. 2) The epimera are in four groups and are perforated by small pores which give them a sievelike appearance.



The genital opening is flanked by two movable sclerotized porous valves. On the inner margin of each valve, anteriorly and posteriorly, are two large suckers while the rest of it is covered by fine hairlike setae. The outer edge of each valve bears 8-9 genital suckers. Medially to these are another 8-10 suckers irregularly arranged. Length of genital organ, 185  $\mu$ ; width 225  $\mu$ .

The structure of the ventral plates is similar to that of the dorsal plates. Round each genital valve curves a narrow elongated plate. Medially on either side of, and anterior to the anus, is a small plate. Lateral and posterior to the anus, respectively, are two larger plates on both sides of the anus.

**Maxillary organ** (Fig. 3): The pedipalp has a length of 239  $\mu$ , segment IV measuring 106  $\mu$ . In addition to the thick setae on all the segments, the second segment also bears two stout setose setae. The fourth palpal segment is always larger than the others.

**Habitat and locality:** Holotype female and paratypes (3 females and 2 males); collected from a dolomite spring, Gerhardminnebron, Potchefstroom, June, 1957.

**Hansvietsia sempiterna** Viets 1951. Figs. 4-6.

**Habitat and locality:** Found in a dolomite spring, Gerhardminnebron, Potchefstroom, June, 1957. Collection deposited at Institute for Zoological Research, Potchefstroom.

**Colour:** Bright red.

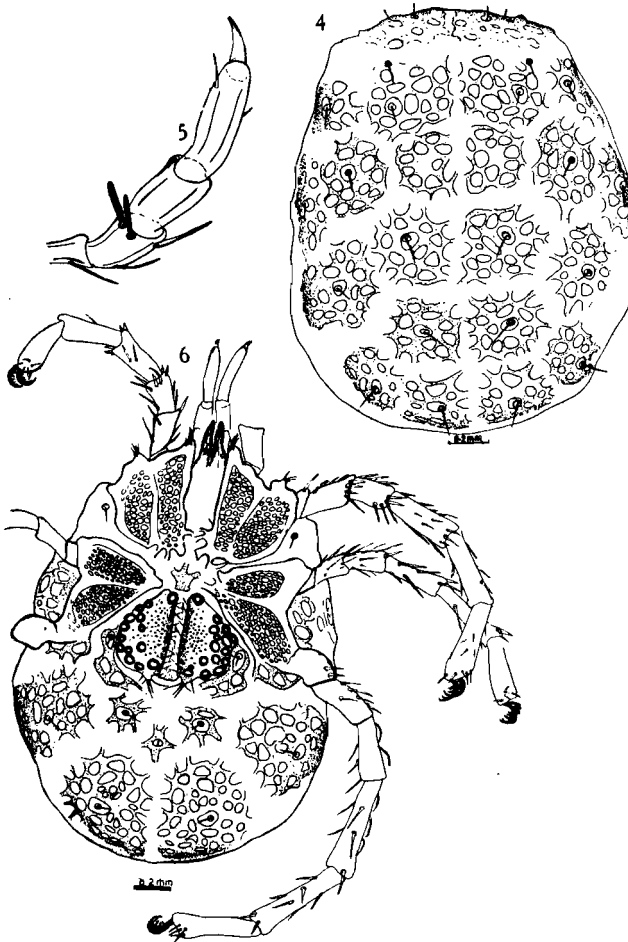
**Dimensions:** Length of body 839  $\mu$ ; width 634  $\mu$ ; length of pedipalp 270  $\mu$ ; length of palpal segment IV 125  $\mu$ ; length of genital valve 138  $\mu$ ; width of genital organ 236  $\mu$ .

This species appears to be conspecific with the specimens described by Viets (1951) from the Central Sahara.

Judging from Viets' figures and description, the chaetotaxy, the number and structure of the plates (fig. 4), the relative length of palpal segment IV (fig. 5), the number of genital suckers and the structure of the legs (fig. 6) are similar to those of the specimens in hand. The only variation which could be observed is the fact that the genital suckers are not arranged in definite rows as is the case in the specimens described by Viets.

**Remarks:** *H. reticulatus* can readily be distinguished from *H. sempiterna* on account of the following characteristics: In *H. sempiterna* the roundish pores of the plates are relatively small and the edges of the plate do not form needlelike protrusions as in *H. reticulatus*. The pores in the latter are large and almost diamond-shaped. The genital suckers on each valve in *H. reticulatus* are usually more than 16 in number whereas in *H. sempiterna* it usually bears less than 16. The suckers appear to be arranged more densely in the latter. The stout setae on palpal segment II of *H. reticulatus* seem to be

more clearly setose than those of the other species. The chaetotactic pattern and the number and distribution of the ventral and dorsal plates are similar in both species and are therefore characteristic of the genus.



#### REFERENCES.

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